

HIV/AIDS KNOWLEDGE AND RISK PERCEPTION OF VISUALLY IMPAIRED AND SIGHTED PUPILS IN KENYA

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Abstract:

The aim of this study was to find out HIV/AIDS knowledge level, and perception of risk of infection with HIV/AIDS, of visually impaired and sighted pupils. Differences between visually impaired and sighted pupils HIV/AIDS knowledge and perception of risk of infection were studied. Descriptive survey was used to collect data. The sample included 116 pupils. The mean score for HIV/AIDS knowledge was 92.94% and 87.59% for sighted pupils and visually impaired pupils respectively. The risk perceptions mean score for sighted and visually impaired pupils was 71.08% and 68.03% respectively. There were significant statistical differences between sighted and visually impaired pupils' knowledge of HIV/AIDS and perception of risk of infection with HIV/AIDS. This study recommended the government and other stakeholders increase education programmes to address misconceptions about transmission and make available HIV/AIDS information in accessible formats for the visually impaired through Braille, audio tapes and large print visual aids.

Key Words: Acquired Immune Deficiency Syndrome (AIDS), Human Immunodeficiency Virus (HIV), HIV/AIDS Knowledge, risk perception, visually impaired pupils, sighted pupils

1.0 Introduction

1.1 HIV/AIDS awareness among adolescents

The awareness on aspects of HIV/AIDS among adolescents has been reported to be high in many studies carried out in Kenya (Lunani, 2006; C. Mummah, 2003; Mutua, 2003, Kenyatta University, Kenya, personal communications). However, a significant number of studies report that most adolescents still hold many misconceptions regarding HIV/AIDS transmission and prevention (Lunani, 2006; NASCOP, 2005; Sabwa, 2000). The pandemic continues to spread in the adolescent population without slowing down (WHO/UNAIDS, 2005). Various studies (Lunani, 2006, Kenyatta University, Kenya, personal communication ; UNAIDS, 2005) also report a number of adolescents considering themselves not at risk of HIV/AIDS infection and a lack of behaviour change in spite of the high knowledge levels. This could be because of inability to link knowledge and perception of risk of infection. Many countries with high HIV/AIDS prevalence rates also report unmarried boys and girls being sexually active before 15 years of age (UNICEF, UNAIDS, WHO, 2002).

1.2 HIV/AIDS Education

Information, education and communication (IEC) interventions which have been used to alert the general public about the risk of HIV/AIDS have been based on the assumption that HIV/AIDS knowledge will cause people's sexual behaviour to change from risky sexual behaviour to non risky behaviour or safer sexual practices. HIV/AIDS education on transmission and preventive measures however has not particularly targeted the visually impaired adolescent pupils. HIV/AIDS was integrated in the new syllabus for primary schools in Kenya, (Juma, 2001; Kelly 2000; Ministry of Education, Science and Technology, 2002) however, the Kenyan primary school curriculum does not discuss HIV/AIDS among the Visually Impaired population. In addition, a lot of the HIV/AIDS literature available in schools, in print and electronic media is visual. This poses a challenge to the visually impaired pupils.

1.3 HIV/AIDS among Visually Impaired People

There has been little research round the world on the need of people with disabilities with regard to HIV/AIDS epidemic (Groce, 2003; Health and Disability Working Group, 2004; Kelly, Ntlabati, Oyisi, Van der Riet & Parker, 2003). Studies in South Africa, Uganda, Senegal and Zimbabwe reported that visually impaired youngsters have many mistaken ideas about HIV/AIDS and sexuality because they have less access to information on HIV/AIDS

and sexuality than do their non-handicapped peers (Groce, 2003; IRIN & Plusnews, 2008; Kudzai, 2003). In spite of this, the visually impaired have sexual feelings similar to their sighted peers and face many sexual temptations. Lack of information on HIV/AIDS and safer sex practices, sexual relations among close knit groups of people with visual impairments, the need for acceptance and dependence on others to guide them around makes them highly vulnerable to sexual abuse (Groce 2003).

Seminars by the visually impaired people reported a lack of knowledge and access to information on HIV/AIDS among visually impaired Kenyans (NACC, 2006). Many studies in Kenya carried out on adolescents and HIV/AIDS have concentrated on the sighted (non – visually impaired) population. There has been little research round the world on the need of people with disabilities with regard to HIV/AIDS epidemic but the few studies carried on the visually impaired reported low knowledge levels (Groce, 2003; Health and Disability Working Group, 2004; Kelly, 2004).

It is against this background that this study sought to find out the HIV/AIDS knowledge level of adolescent visually impaired and sighted pupils, to determine their perception of risk of infection with HIV/AIDS and to determine differences between visually impaired and sighted pupils HIV/AIDS knowledge and perception of risk of infection with HIV/AIDS.

1.4 Reasoned Action and Optimistic bias theories

This study was based on two theories that is, the theory of Reasoned Action developed by Martin Fishbein and Icek Ajzen in 1980 and later revised by Ajzen (1985) and the theory of Optimistic Bias by Weinstein, 1984. The assumption in the theory of Reasoned Action is that people are usually rational and make predictable use of information available to them. In this case, the visually impaired and sighted pupils equipped with knowledge of HIV/AIDS transmission and prevention would consider consequences or risks of health related behaviour before engaging in them. Health education programmes on HIV/AIDS are based on the premises of the theory of reasoned action by Ajzen (1985). The assumption is that individual reason determines human action involving indulgence or restraint when faced with a threat to their health (Agglestone, Homans & Mojsa, 1989). The action taken depends on the belief that one can fall prey to a disease, the severity of the disease, degree of exposure to information about the disease and the extent to which one believes that a preventive action has more rewards than costs. HIV/AIDS health education is based on these components (WHO, 1995).

This theory would suggest that if pupils' are knowledgeable and consider themselves at risk, then they are likely to have a positive attitude toward safer sex (prevention) practices

which will reduce their risk of infection with HIV/AIDS. With inadequate knowledge and perception of invulnerability one is likely to have a negative attitude toward safer sex practices thus likely to engage in risky sexual behaviour. Adoption of safer sex practices against HIV/AIDS is likely to be effective when pupils' have comprehensive HIV/AIDS knowledge and when they perceive their risks of infection to be great.

The theory of Optimistic Bias by Weinstein, 1984 on the other hand argues that individuals generally think that they are less likely than the average person to experience health problems. When people who hold this kind of orientation are asked to evaluate their own chances of developing certain diseases compared to others of the same sex, they usually evaluate their own risks to be significantly lower than that of others. The bias appears to emerge from limitations of cognitive processing of risk factors by the individual and it occurs for those risks which are perceived to be preventable and are infrequent with the individual having little experience (Moore & Rosenthal, 1993; UNAIDS, 2003).

It is probable that adolescents infected with HIV/AIDS show symptoms when they are in their early twenties. This theory would propose that the adolescents will fail to personalize the disease perceiving it as an adult problem or a disease for certain groups of people and not themselves. Thus they perceive their risk of infection with HIV/AIDS to be lower than that of their peers (Schonbeck, 2004). This theory was useful in determining pupils' perceptions of risk of infection with HIV/AIDS.

It is against this background that this study sought to find out the HIV/AIDS knowledge level of adolescent visually impaired and sighted pupils, to determine their perception of risk of infection with HIV/AIDS and to determine differences between visually impaired and sighted pupils HIV/AIDS knowledge and perception of risk of infection with HIV/AIDS.

2.0 Main Text:

2.1 Methods

A descriptive survey was used in this study. According to Lovell & Lawson, (1970), a descriptive survey research is concerned with describing existing phenomena, perceptions, beliefs and attitudes that are held, processes that are ongoing and trends that are developing. This study sought to establish existing knowledge level of HIV/AIDS, perceptions and beliefs that are held in regard to HIV/AIDS knowledge and risk perception. The independent variables of the study were; HIV/AIDS knowledge, visual type and gender, whereas the dependent variable was the perception of risk of infection with HIV/AIDS.

2.2 Ethical consideration

The researcher sought permission/clearance to conduct research from the Ministry of Higher Education Science and Technology (MOHEST) in Kenya. The study was approved and Research Permit number MOHEST 13/001/38C651 given to the researcher. The body ensures that research or studies to be carried out do not violate ethical principles in conducting research. Consent was also sought from the headteachers of the schools studied and an expert in the field of learners with visual impairment who saw the study important.

2.3 Location of study and sampling procedures:

The study was located in Thika Municipality; Thika District which had the highest number of visually impaired pupils in Kenya. The study was carried out in two primary-level schools, one school for visually impaired pupils and one school for sighted pupils. The schools cater for students from families from low-socio-economic status. The degree of blindness ranged from Pupils who were totally blind thus could not see at all, or were partially blind, that is, they see minimally with a lot of difficulty hence they need aid – it also included those who wear corrective glasses or aids and could see with the correction but could not see without the correction. Purposive sampling was used to select the school for visually impaired pupils since the researcher was interested in pupils with characteristic of blindness. Random sampling was used to select the school for the sighted pupils. Only pupils in the upper primary school classes that is, in standard seven and standard eight were included in the study. All the pupils were aged between 12 to 21 years, the researcher was interested in pupils in the adolescence stage and the sample which was randomly sampled, comprised of 57 visually impaired pupils and 59 sighted pupils totalling to 116 pupils.

2.4 Research instruments:

A HIV/AIDS knowledge attitude questionnaire was used to collect data. The first section of this questionnaire sought information on the pupils' HIV/AIDS knowledge and it required a YES/NO response while the second section sought information on risk perception and it was based on a 5 point likert scale. Split half technique was used to calculate reliability. Spearman-Brown prophecy formula was used to correct realized coefficient. Reliability of the revised instrument was: Knowledge scale: 0.853 and Risk perception scale: 0.717. The questionnaire for the visually impaired pupils was transcribed with the help of the African Braille centre in Kenya.

3.0 Discussion

3.1 Age statistics for the pupils

The mean age for the sighted and visually impaired pupils was 13 and 15.9 years, respectively. The standard deviation for the age was 0.9450 for sighted pupils and 2.2108 for visually impaired pupils. The minimum age was 12 years and the maximum age was 21 years, giving a range of 9 years. The maximum age for the visually impaired was 21 compared to 16 years for the sighted pupils. This means that the oldest pupil was found among the visually impaired. This pupil could have started school at an advanced age or had to drag in the system because of the visual impairment that may have affected him/her. Other studies (Sichare, 2004) have reported similar findings where visually impaired students were found to be older than their sighted classmates.

3.2 HIV/AIDS knowledge and risk perception average score

The findings on HIV/AIDS knowledge and risk perception are presented in Table 1. The mean knowledge score was 87.61% for visually impaired pupils and 92.95% for sighted pupils'. Sighted pupils had a higher HIV/AIDS knowledge mean compared to the visually impaired. Standard deviation for the HIV/AIDS knowledge score was 6.8266 for visually impaired pupils and 4.2322 for sighted pupils. The mean score for HIV/AIDS risk perception for the visually impaired pupils was 68.04% and 71.08% for the sighted pupils. The standard deviation was 9.7210 for visually impaired pupils and 11.6372 for sighted pupils. It was noted that the sighted pupils had a higher score than the visually impaired pupils on the HIV/AIDS knowledge and risk perception scale.

Table 1: Average score of HIV/AIDS knowledge and risk perception of visually impaired and sighted pupils

Variables	Average (mean) score \bar{X}		Total Sample average score \bar{X}
	Visually impaired pupils \bar{X}	Sighted pupils \bar{X}	
Knowledge	87.61	92.95	90.32

Risk perception	68.04	71.08	69.59
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More visually impaired pupils reported more misconceptions compared to the sighted pupils. These findings were consistent with those reported by Rambiywo (2006) in South Africa, where visually impaired people registered lower scores on the HIV and AIDS knowledge index than other people. Kudzai, (2003) carried out a study on visually impaired adolescents in Zimbabwe and reported similar results. Studies in South Africa and Uganda by Groce, (2003) and Health and Disability Working Group, (2004) carried out on visually impaired women registered similar results. However, there were some visually impaired pupils who reported high scores on their individual questionnaires, thus they may have had better access to HIV/AIDS information.

3.3 Sighted and visually impaired pupils' perception of risk of infection with HIV/AIDS

Table 2 shows that more visually impaired pupils considered themselves at risk than the sighted pupils with percentages of 25% and 18% respectively. More sighted pupils (32%) considered themselves not at risk of HIV infection compared to 25% of the visually impaired pupils.

Table 2: Sighted and visually impaired pupils' perception of risk of getting HIV/AIDS

Risk of getting HIV/AIDS	Sighted		Visually Impaired		Total percentage
	Frequency	Percentage	Frequency	Percentage	
Yes (At risk)	20	18%	29	25%	43%
No (Not at risk)	37	32%	28	25%	57%
Total	57	50%	57	50%	100%

The results of this study affirm the personal fable or adolescent belief that ‘one is special, and invulnerable to the risks that befall other people’ (Moore & Rosenthal, 1993). These results are consistent with the theory of Optimistic Bias developed by Weinstein in 1984 whereby people usually evaluate their risk of infection with certain diseases to be significantly lower compared to others. Similar results were found by Lunani (2006), Sabwa (2000), Kenyatta University, Kenya, personal communication, Mummah (2003), Nzioka (1994) and Bilgan, (1990). However the percentage was less than 50% in each group.

The fact that more visually impaired pupils considered themselves at higher risk of infection may imply that they felt more vulnerable because of risk of being raped or sexually abused, may not have the power to negotiate for safe sex, and they could be more informed about HIV/AIDS or they lacked enough information about HIV/AIDS. These results are similar to the findings of SAFAIDS (2005) on a study carried out among visually impaired women in South Africa.

Kruskal Wallis/ANOVA test was used to determine if there was a statistically significant difference between visually impaired and sighted pupils’ knowledge of HIV/AIDS. The results of the analysis are shown in Table 3. The findings indicated that there was a statistically significant difference in HIV/AIDS knowledge scores between the visually impaired and sighted pupils. The null hypothesis was therefore rejected at 0.05 level of significance because the calculated P value .0002 was less than 0.05. Thus, the difference in the mean ranks for each group (that is, 44.95 and 71.59 for visually impaired and sighted, respectively) was significant.

These findings are similar to those reported in a research by Rambiyawo (2006) in South Africa, where visually impaired people registered lower scores on the HIV and AIDS knowledge index than other people thus indicating low levels of knowledge of AIDS issues among visually impaired. Kudzai, (2003) and other studies in South Africa and Uganda by Groce, (2003) and Health and Disability Working Group, (2004) carried out on visually impaired women registered similar results.

Table 3: Kruskal-Wallis test for differences between visually impaired and sighted pupils' knowledge of HIV/AIDS

Ranks				Test statistics ^{ab}	
Knowledge score	Visual type	N	Mean Rank		Knowledge score
	Sighted	59	71.59	Chi-Square	18.506
	Visually impaired	57	44.95	df	1
	Total	116		Sig.	.0002

a. Kruskal Wallis Test b. Grouping Variable: visual type

Kruskal-Wallis/ANOVA test was used to establish if there was a statistically significant difference between visually impaired and sighted pupils' perception of risk of infection with HIV/AIDS. The summary of results analysis is shown in table 4. The findings indicated that there was a statistically significant difference in risk perception scores between the visually impaired and sighted pupils. The calculated P value 0.021 was less than 0.05. The null hypothesis was therefore rejected at 0.05 level of significance. Thus, the difference in the mean ranks for each group (that is, 51.16 and 65.59 for visually impaired and sighted, respectively) was significant.

Table 4: Kruskal-Wallis test for differences between visually impaired and sighted pupils' risk perception

Ranks				Test statistics ^{ab}	
Perception	Visual type	N	Mean Rank		Perception Score
	Sighted	59	65.59	Chi-Square	5.357
	Visually impaired	57	51.16	Df	1

	Total	116		Sig.	.021
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a. Kruskal Wallis Test b. Grouping Variable: visual type

3.4 **Implication of the findings**

The implication of this finding is that the sighted pupils may be more informed than the visually impaired thus consider themselves at higher risk of HIV/AIDS infection. These results support the theory of reasoned action by Ajzen (1985) that people are usually rational and make predictable use of information available to them. In this case, the sighted pupils with high knowledge levels rationalized and considered themselves at higher risk of HIV/AIDS infection than the visually impaired whose knowledge level was lower.

The implication of these findings for policy makers in education and health sector is that, there is still a lot to be done in terms of reaching those who have not been reached with education on HIV/AIDS and addressing the misconceptions and yawning HIV/AIDS knowledge gaps. The social strategists should be able to see the inequality between the sighted and visually impaired pupils in terms of addressing their health needs. This indicates that visually impaired persons are still segregated even in terms of addressing a crucial part of their health needs. Teachers for the visually impaired pupils need to be proactive in sensitizing the education and health sectors on the gaps pupils have in relation to HIV/AIDS. They should also be creative in finding better ways to teach HIV/AIDS Education to the visually impaired pupils.

3.5 **Conclusion**

The significant statistical differences in the HIV/AIDS knowledge and risk perception between the visually impaired and sighted pupils implied that the visually impaired had more misconceptions regarding HIV/AIDS thus they had been segregated in the awareness campaigns. They also lacked good understanding of risk factors for HIV/AIDS. This means that education campaigns on HIV/AIDS have not been specific in their awareness programmes to address the needs of the visually impaired adolescent pupils in particular.

This study recommended that the government increases the education programmes to address the various misconceptions about HIV/AIDS transmission. There is need to avail information in accessible formats for the visually impaired through Braille, audio tapes and large print visual aids and train teachers on how to educate the visually impaired pupils and young people in general on HIV/AIDS.

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